ELECTRONIC RECORDS ARCHIVES

CONCEPT OF OPERATIONS
(CONOPS)

for the

NATIONAL ARCHIVES AND
RECORDS ADMINISTRATION

ELECTRONIC RECORDS ARCHIVES
PROGRAM MANAGEMENT OFFICE
(NARA ERA PMO)

Final
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CONCEPT OF OPERATIONS (CONOPS)

Signature Page

Program Director,

The Concept of Operations Integrated Product Team has developed this ConOps document for the ERA Program Management Office as per our charter. The members of this team are:

Richard J. Steinbacher - Deputy Chair
Laurence Brewer
Elizabeth K. Lockwood
William A. Harris
John Martinez
Diane Vogt-O'Connor
Jon Valett (ERA Program Office Support Team)
Sharon Burke (ERA Program Office Support Team)

We recommend acceptance of this document.

_____   _____
Richard J. Steinbacher,   Date
ConOps IPT Deputy Chair

Accepted,

_____   _____
Kenneth Thibodeau,   Date
ERA Program Director

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♦ **National Archives and Records Administration** ♦

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CONCEPT OF OPERATIONS (CONOPS)

1.0   Scope

The Electronic Records Archives (ERA) System Concept of Operations (ConOps) is a user-oriented document that describes the desired characteristics of the system from the user's viewpoint. The ERA system includes all of the associated equipment, facilities, material, software, hardware, policy, technical documentation, services, and personnel required for operations and support at the National Archives and Records Administration (NARA).

The ConOps document serves as a vehicle to communicate the high-level quantitative and qualitative system characteristics of the system to the user, buyer, developer, and other stakeholders. The ideas expressed in the ERA ConOps are the result of analyzing the challenges involved in the preservation of electronic records and the development of a model of a proposed system to efficiently address these challenges.

1.1   Document Overview

This section describes the approach for developing the ConOps. Explanations of frequently used terms are located in **Appendix A, Definitions**.

1.1.1   Approach

The document was developed using concept analysis, the process of analyzing a problem domain and an operational environment for the purpose of specifying the characteristics of a proposed system from the users' perspective. This method helps to clarify and resolve vague and conflicting needs, wants, and opinions by reconciling divergent views. Using concept analysis also thwarts development of a system in which each individual function meets its specifications, but the system as a whole fails to meet the users' needs. The results of concept analysis are recorded in the ConOps document and became the framework for all subsequent activity leading to system deployment.

1.1.2   ConOps Integrated Product Team

This ConOps document was created by the ConOps Integrated Product Team (IPT) composed of representatives from across NARA. With a charge to look beyond current business practices or technical capabilities, the ConOps IPT approached the task from a user's perspective, identified broad user classes, and described the ERA system through user scenarios.

This methodology was followed because it emphasizes an integrated view of a system and its operational characteristics, rather than individual functions or pieces of a system. Though broad in scope, this ConOps describes a comprehensive system to address the challenge of preserving and accessing electronic records. It is a challenge that encourages NARA to consider different approaches for accomplishing its mission and goals.

Thus, this ConOps may challenge previously held views of what ERA will be and how it will come about. The ConOps IPT chose consciously to think beyond current concepts and to define

a very broad vision of ERA. This document never suggests that the entire ERA system will be built all at once or that it will be built entirely from scratch. This document does suggest that the ERA system will require NARA to reexamine current business processes to confront the challenges of electronic records.

1.1.3   IEEE Standard

The ConOps document complies with IEEE Std 1362-1998, *IEEE Guide for Information Technology-System Definition-Concept of Operations (ConOps) Document*. This guide identifies the approach and minimal set of elements that should appear in any ConOps document for a software-intensive system, one that is comprised of hardware, software, people, and manual procedures.

1.2   ERA Program Overview

The Archivist of the United States established the ERA Program in NARA Notice 2000-074 to address critical issues in the creation, management, and use of electronic records. As a program, ERA comprises the policies, procedures, practices, and the necessary technology that will enable NARA to build the ERA System to receive, preserve, and provide access to electronic records. The resulting ERA System will be a comprehensive, systematic, and dynamic means for preserving virtually any kind of electronic record, free from dependence on any specific hardware or software. In addition to handling the actual records, ERA also will automate electronic records life cycle management activities. ERA, when operational, will make it easy for NARA customers to find records they want, and easy for NARA to deliver those records in formats suited to customers' needs.

2.0   References

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3.0   Current Capability

At this time, NARA's archival processes for electronic records are neither fully automated nor fully integrated. The electronic records collected by NARA over the past quarter century consist primarily of data files and databases. Current accessions of records are increasing in scope, diversity, and volume.

The content and internal structure of the electronic records that are being accessioned reflect a broad spectrum of programs and activities of the Federal Government. Changing technologies support new and different types of data with enhanced formats (e.g., e-mail, geospatial data, digital imagery, office automation products, etc.). In addition, the rapid growth of the Internet is fueling increased public demand for improved on-line access to the electronic records held by NARA. Consequently, all of these factors motivate the need for a system that will adequately preserve electronic records as long as they are needed, while providing access to them.

3.1   Background

NARA is not new to the preservation of electronic records. Three decades ago, the agency developed an electronic records management strategy. Since that time, NARA has used that strategy to accession, preserve, and provide access to a significant number of highly structured electronic records. This strategy calls for the storage of data in a software and hardware-independent format (typically fixed length or delimited files in a standard character set, such as the American Standard Code for Information Interchange (ASCII)), on a master and back-up copy of proven, commercially available storage media.

For the storage of the data that have been accessioned, NARA adheres to prescribed environmental standards, performs annual statistical sampling to guard against any loss of data, and copies the records onto new media before any deterioration of the current media occurs. Historically, media refreshment has occurred on a 10-year cycle.

NARA's current services for providing access to electronic records in its holdings allow researchers to search NARA-created finding aids (in hard copy or on the World Wide Web) to identify what collections are available. NARA then allows researchers to obtain copies of documentation on the structure and content of those collections or to visit NARA's facility in College Park, MD, to review that documentation and purchase copies of entire data sets for their own use. NARA also has made the content of a few of its most frequently requested collections available via the Internet.

3.2   Operational Overview

In NARA's current environment, systems such as the Archival Preservation System (APS) and Archival Electronic Records Inspection And Control (AERIC) system allow it to preserve the bits that make up electronic records and verify the structure and content of a limited number of types of electronic records. When fully implemented the Archives Document Review and Redaction System (ADRRES) and the Unclassified Redaction and Tracking System (URTS) may be instrumental in the access review process for electronic records. In addition, new

development is underway to support user access through the Archival Research Catalog (ARC) and Access to Archival Databases (AAD) systems. The functional capabilities of the APS, AERIC, ADRRES, URTS, ARC, and AAD systems will be included in the long-term technical solution and suite of information technology (IT) tools for lifecycle management of records. APS, AERIC, and AAD address requirements that are specific to electronic records. These requirements will be addressed within the ERA system itself. Other existing systems address requirements that apply to other types of records. NARA intends to provide interoperability across lifecycle management applications through its target enterprise architecture. For additional information about existing systems, refer to NARA's *Baseline Characterization Document* (BCD).

4.0   Justification for and Nature of Changes

Over the last three decades, NARA has been successful in the area of preserving highly structured electronic records because the volume and record types were manageable. Today, the volume, complexity and diversity of records has grown significantly, making the current technical strategies that support preservation, management, and sustained access inadequate and inefficient. No standards exist for transferring many of the new types of records to NARA, and no mechanism exists for fully preserving and providing access to them once they are transferred. Current preservation processes are labor intensive. Therefore, as record volume increases, resource utilization will also increase. Finally, for most types of records, NARA cannot provide the access the public desires and deserves.

4.1   Justification of Changes

Advances in technology have spawned diverse types of electronic records along with the capability to generate increased volumes of records quickly and efficiently. NARA is currently only able to fully manage fixed length or comma delimited electronic records. Given the speed of technological change, this method is clearly inadequate to deal with the types and volumes of electronic records currently created by the Federal Government. Furthermore, the current method will not maintain the essential characteristics of all types of electronic records. The challenge, therefore, is to develop a system that will preserve the content, context, structure, and presentation of an increasing volume and variety of types of electronic records.

The following case is an example of why electronic records must be properly accessioned, preserved, and made available. The PROFS (IBM Professional Office System) case (Armstrong vs. Executive Office of the President) in 1993 was the watershed event that focused both government and public attention on contemporary electronic records. This case began in January 1989 as an effort to compel the government to preserve electronic records stored on back-up tapes from the National Security Council's PROFS e-mail system, a system whose records included messages pertaining to the Iran-Contra Affair. The Armstrong case showed that electronic versions of e-mail, as compared with hard copy required to be maintained under then existing policies, contained "qualitatively different" information of "tremendous historical value in demonstrating what officials knew, and when they knew it," (Armstrong vs. Executive Office of the President, 810 F. Supp. 355, 341 [D.D.C. 1993]).

A more current incident demonstrates the peril inherent in NARA's inability to keep up with the spiraling momentum of technological change.   Websites, virtually unheard of when the above e-mail event occurred, were captured and transferred to NARA at the end of the Clinton administration. Although NARA has possession of these websites today, it cannot guarantee future accessibility due to the absence of a robust preservation methodology.   Unless NARA acts quickly, it will face an onslaught of such dilemmas with possible loss of essential evidence.

Compounding the increase in electronic record complexity is the fact that the quantity of NARA's permanently valuable federal electronic records is increasing significantly. A decade ago NARA was accessioning only thousands of files a year. It is estimated that from 2005 through 2010, the projected accumulated volume of electronic records received by ERA will be

0.9 petabytes, increasing to an estimated accumulated volume of 10.7 petabytes by 2014. More information pertaining to the increase in volume is available in the ERA *Mission Needs Statement (MNS)* document.

These statistics do not include the electronic records for which only minimal preservation work has been done due to the complexity of the records' formats. Nor do they include those records in formats that have not yet been offered to NARA for preservation since the originating entity has no way to transfer them. NARA is inundated with electronic records now and expects a great many more in the near future.

4.2   Adverse Effects

The effects of not proceeding with the development of a system to manage electronic records are many and include the following:

- Electronic records that document citizens' rights, the actions for which officials are accountable, and the nation's history will all be lost without an effective system for ensuring both the preservation of, and access to them.

- Public confidence will be shaken by NARA's diminished ability to provide essential evidence of the rights of American citizens, the actions of federal officials, and the national experience.

- NARA's role will be increasingly reduced as the nation's record-keeper if it does not provide direction or cannot store electronic records created by the Federal Government.

- As the volume of electronic records increases, the backlog will grow and the ability to manage that backlog will diminish.

- Legislation and legal proceedings will be adversely affected when we no longer have access to papers and documents required too prosecute cases or uphold/overturn existing laws.

- The political landscape will change when we no longer have access to presidential electronic records or can no longer retrieve other essential information documenting the workings of the Government.

5.0   Concepts for the Proposed System

ERA will take advantage of sound and proven technologies in order to accommodate the volume, diversity, and complexity of electronic records that NARA must address both now and in the future. Managing electronic records requires an integrated, automated process from receipt through final disposition and public access. The increased volume and complexity of the records demands this kind of management. Consequently, the ConOps described in this document stresses urgency for a high-level of automation that will result in changes to the current approach to managing electronic records.

In addition, this document asserts that ERA will be capable of addressing not only those records permanently accessioned into NARA holdings, but also those held temporarily in NARA's physical custody. The ConOps IPT chose to develop a system that meets all expressed NARA needs rather than to significantly limit ERA capabilities at the conceptual stage. This ConOps document leaves open the possibility for a broad range of capabilities to be determined at a later date. The scope of capabilities is dependent on available resources, technical considerations, and policy decisions.

ERA must be capable of addressing electronic records for which there has been little or no front-end involvement or preparation prior to their transfer by the originating entity. Further, the user scenarios presented in this document recognize that NARA staff may act in the role of the originating entity. While the scenarios assume some degree of front-end involvement, they include the possibility that all transfers may not conform to ERA requirements. Acknowledging that the level of processing and service for nonconforming electronic records may vary, ERA will nevertheless provide a means of preserving and accessing these materials.

5.1   Background, Objectives, and Scope

Defining what is necessary to achieve ERA system implementation began with vision development. ERA definition continues with a detailed identification of ERA expectations, constraints, and operational conditions. From an overall system perspective ERA should possess the following attributes:

- Infrastructure independence: an architecture independent of any specific hardware and software

- Modularity: ability to use plug-in components that can be replaced with minimal impact to remaining components as workload and technology change

- Scalability: capable of accommodating growth and managing differing sizes of repositories and ever increasing volumes of materials

- Extensibility: be able to handle additional kinds of electronic records over time; not limited to specific types of records that exist today

5.2   Operational Policies and Assumptions

The ERA conceptual model and subsequent ERA system rely on a set of assumptions that are derived from NARA's operational policies or are inherent in an IT environment:

- ERA will be an integral component of NARA lifecycle management of electronic records.

- ERA will facilitate process improvements and service improvements both for a process executed using ERA and for external processes that intersect or overlap with ERA processes.

- ERA will manage the NARA electronic records workflow for records transferred from originator to NARA custody.

- ERA will manage electronic records from all classes of originators whom NARA serves, including federal and presidential records, congressional records, and donated historical materials.

- ERA will serve all NARA components nationwide responsible for such records.

- The scenarios described in this document do not explicitly include or address paper records or other records not maintained within ERA, but NARA will have to establish effective mechanisms to link ERA to the lifecycle management of other records related to those maintained in ERA.

- ERA could handle temporary as well as permanent records and have a systematic way to enact disposal of the temporary records.

- Transfers of archival materials to ERA will conform to applicable NARA policy and procedures.

- ERA will process, to the extent possible, all types of materials using templates (A template is a model of the essential characteristics of the content, context, structure, and presentation of a type of documentary material against which a record can be validated).

- ERA will manage electronic records transfers of varying levels of compliance to its transfer requirements.

- ERA will provide different levels of processing and service depending on level of compliance of a transfer to ERA transfer requirements.

- ERA will systematically preserve electronic records' content, context, structure, and essential behaviors, such as presentation.

- ERA will preserve records as members of organized collections in the order established by their originators.

- ERA will comply with all applicable laws and regulations, notably:
  - The Federal Records Act and the Presidential Records Act;
  - Laws and regulations regarding IT security; and
  - Laws and regulations regarding national security, freedom of information, privacy, and intellectual property.

- ERA will comply with NARA guidelines regarding access to unprocessed materials.

- ERA will provide public access to all preserved electronic records, subject only to legal restrictions.

5.3   Description of the Proposed System

The ERA System described here documents the consensus of the ConOps IPT, with recommendations from other NARA reviewers, on necessary and desired ERA characteristics. This section provides the conceptual model of the entire system. Details on major components are presented in the next section in the form of operational scenarios.

5.3.1   User Classes

Although a user can be defined as anyone who will interact with ERA, a user class is determined by the ways in which the user interacts with the system. Seven major user classes have been identified for the ERA System including:

- Originating Entity - Creates and receives documentary materials and prepares and transfers them to NARA

- Appraiser - Makes recommendations on materials that will be transferred to NARA holdings or will be disposed of by the Originating Entity

- Accession Processor - Accessions and processes a transfer

- Preserver – Performs processing activities that ensure ability to provide long-term access to documentary materials

- Access Reviewer - Reviews documentary materials in NARA custody for access restrictions

- Record User - Uses the system to access documentary materials

- Administrative User - Handles such activities as granting user access rights, monitoring system performance, and scheduling reports

5.3.2 Capabilities

High-level ERA capabilities correspond to specific current NARA tasks and the users' needs and desires for the ERA system. They are organized according to user class but some capabilities cross user class boundaries.

Originating Entity

- Receives electronic documentary materials from originating entities regardless of physical form or characteristics
- Offers tools to assist originating entities in preparing documentary materials for transfer to ERA
- Allows originating entities to search ERA for templates of documentary materials
- Allows originating entities to register records templates in ERA
- Provides a reliable method of communication between the originating entity and NARA

Appraiser

- Validates records templates
- Facilitates the review of documentary materials
- Facilitates the review and approval of disposition agreements
- Generates tracking, performance, and implementation reports
- Provides a reliable method of communication between the originating entity and NARA

Accession Processor

- Receives transfers of electronic documentary materials
- Facilitates verification of transfer
- Facilitates accessioning and security review of documentary materials
- Facilitates review and verification of content of documentary materials
- Facilitates reviews, and if necessary, changes to relationships between documentary materials

Preserver

- Facilitates the articulation, registration, and management of records templates
- Ensures that transfers of documentary materials satisfy requirements for preservation
- Verifies preservation of documentary materials and, if necessary, transforms documentary materials to enable preservation and sustained access
- Fully documents the activity of transformation
- Ensures the continuing authenticity of preserved materials
- Facilitates description of documentary materials
- Enables improvement of quality or service

Access Reviewer

- Allows for systematic review of collections
- Allows for review of specified records in response to a request
- Coordinates access review issues with equity-holders outside NARA when necessary
- Indicates the item access status when the review is complete
- Facilitates redaction of still sensitive information from otherwise open documentary materials
- Changes access status determinations over time in subsequent reviews and appeals and maintains and tracks the various versions
- Tracks access review work and produces reports regarding production

Record User

- Facilitates querying
- Provides searching capabilities
- Allows for mediated request and charge-back capabilities
- Facilitates searching for documentary materials at multiple levels of aggregation
- Facilitates ordering of copies and other services

Administrative User

- Enforces access control
- Registers or authorize users
- Provides reporting capabilities
- Tracks workflow
- Tracks use of ERA
- Provides performance measurement capabilities

5.3.3   Interactions Among User Classes

The ERA system described here is an overall conceptual workflow model that depicts where user classes interact within the system and with each other. **Figure 5-1, ERA User Classes**, illustrates this conceptual model. The Administrative user and relevant capabilities are embedded in all components of ERA.

ACCESSION　*MANAGE*　*ACCESS*

Preserver
Undertakes activities that ensure the reproducibility of the essential characteristics of electronic records over time

Originating Entity

*Provides
the records*

For example:
-Executive Branch Agency

-Presidential Administration

-Legislative Branch Agency

-Judicial Branch Agency

Appraiser

Makes recommendations on materials that will be transferred to NARA holdings or will be disposed of by the Originating Entity

Accession Processor

Undertakes the processing of a transfer

Access Reviewer

Conducts access review of documentary materials in NARA custody

End User

Searches ERA for information about records and within records

For example:

- Originating Entity

- NARA reference archivist

- Public

Administrative User
Handles such activities as registering or authorizing users, enforcing access controls, tracking and scheduling reports

Figure 5-1: ERA User Classes

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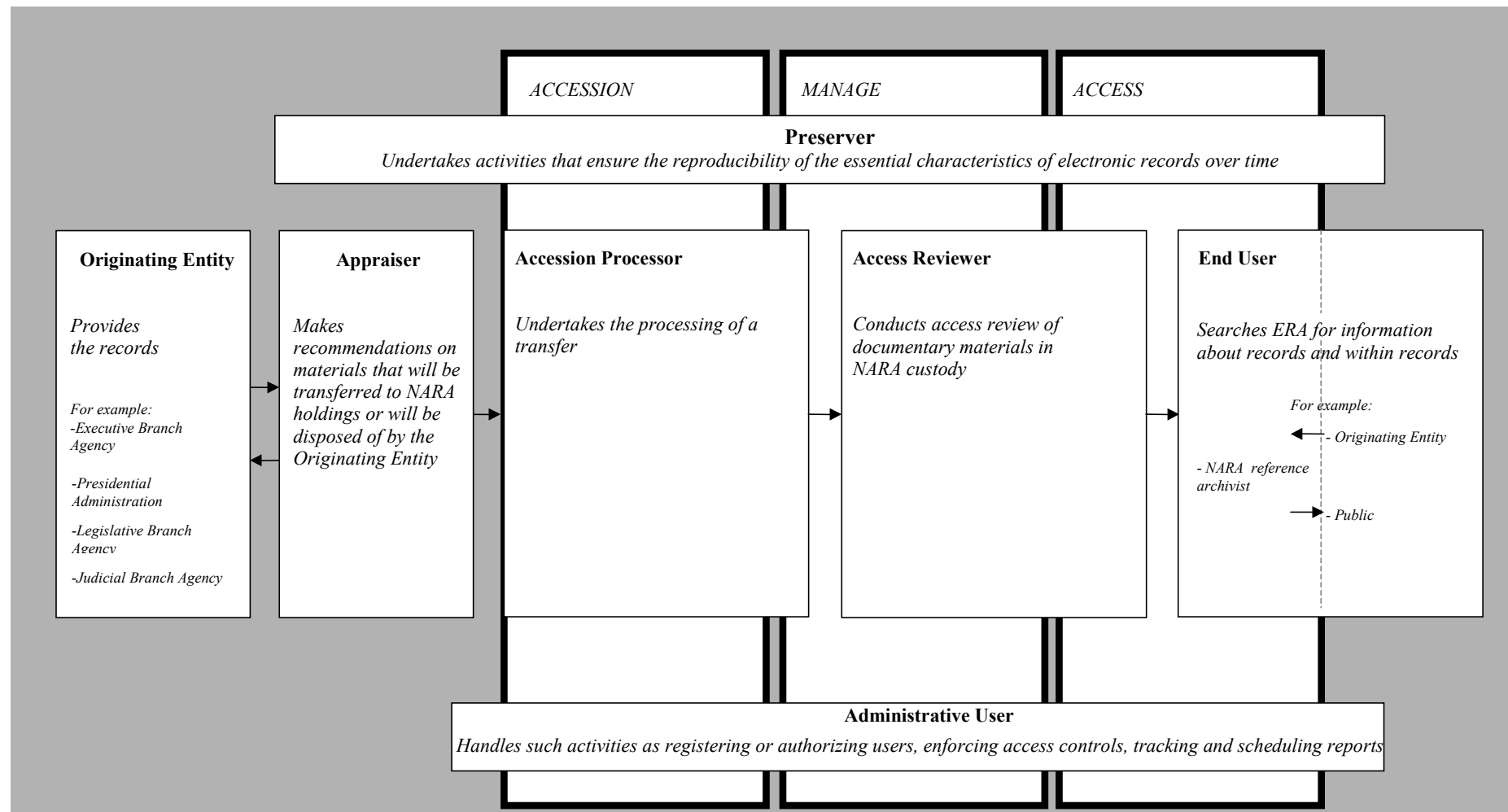
6.0   Operational Scenarios

The ERA ConOps document expresses what users want and envision in the ERA System. Scenarios convey these needs in simple non-technical language. Overlap occurs between different scenarios as a result of interaction between different users or due to similarity between different activities.

The scenarios provide a description of how ERA should operate and interact with users and external interfaces under a given set of circumstances. Scenarios cover the user's concept of all the operational modes and all classes of users identified for the proposed ERA System. Explanations of frequently used terms are located in **Appendix A, Definitions**.

6.1   Originating Entity Scenario

The following scenario represents one example of how an originating entity might use NARA guidance to manage documentary materials and prepare them for transfer to ERA. The scenario is broad enough to include all types of originating entities, as well as all types of documentary materials they create or receive. As a result, this example is not intended to identify all possible situations for this user class. In addition, the steps listed below should not be interpreted as a fixed sequence of events, but instead as an illustration of capabilities ERA will offer originating entities. For example, ERA will have the capability to:

- Receive electronic documentary materials from originating entities regardless of physical form or characteristics

- Offer guidance and tools to assist originating entities in managing documentary materials and preparing them for transfer to ERA

- Allow originating entities access to ERA in order to search for templates of documentary materials that are needed to manage and transfer materials to ERA, or to register and store such templates in ERA

- Facilitate a method of communication between the originating entity and NARA

NARA expects that ERA will rely on documentary material templates and related format standards to manage electronic records, and especially to control and preserve records that will be permanently retained. However, NARA will continue to receive documentary materials from originating entities that do not conform to specific data in approved disposition agreements (e.g., disposition authorities, deeds of gift) or templates registered in ERA. In many cases, the level of control and preparation applied to the materials will vary, depending on the value of the materials. In other cases, where the originating entity no longer exists or does not have the resources to undertake the preparations necessary for transferring documentary materials to ERA, NARA staff will serve as the originating entity performing many of the following tasks.

6.1.1   User

Originating entity users are creators, custodians, managers (e.g., records officers), and system managers or administrators that create, receive, maintain, or manage documentary materials. They interact with each other at various points in this scenario and with users defined in other scenarios in this document. In certain cases, such as for presidential materials, NARA often will act as an originating entity.

6.1.2   User Activities

1. Create, receive, identify, and manage documentary materials.

    NOTE: This is an initial, high-level step performed at the point of creation or receipt that may involve ERA as indicated below.

    - The originating entity creates or receives documentary materials in a variety of formats that are maintained on various media. Electronic documentary materials may be born digital or converted from paper, microfilm, or other non-digital materials.

    - Once materials are created or received, the originating entity (e.g., creators, custodians) identifies the materials as belonging to a grouping of related materials (e.g., record series or collection). For example, a case file of legal briefings, transcripts, and exhibits associated with a particular court case would be managed as a group, rather than as individual documents under separate control.

    - The critical task of this activity is determining whether the materials comprise a new grouping, or are accretions to existing groupings already maintained by the originating entity. For federal records, creators would refer to a current approved records schedule or contact their records officer for guidance. Records officers (or managers in non-Federal originating entities) may search ERA for groupings that would assist them in making this determination.

2. Place materials under systematic control.

    - Creators and custodians in the role of originating entity manage electronic documentary materials to facilitate their active use. Based on the importance or value of the materials, and also depending on the available resources, this task will be completed to varying degrees of detail. NARA makes guidance available to creators and custodians to assist in the description and control of electronic documentary materials within the originating entity.

    - Using NARA guidance and tools offered by ERA, originating entities identify the key characteristics of the documentary materials that accurately represent their content, context, structure, and presentation. These characteristics are based on a core set of elements required by NARA for acceptance of a transfer of electronic documentary

materials but will also include characteristics that are unique to the Government domain in which the records are created. For certain materials, the identification of these characteristics may be completed with less detail. Additionally, NARA staff acting as the originating entity may identify such characteristics.

- The documentary materials and their key characteristics are maintained in originating entity-specific electronic systems (e.g., records management applications, electronic information systems) for as long as they are needed for active use. The originating entity is responsible for tracking documentary materials in these systems and identifying any new characteristics that must be tracked if record keeping or business requirements change.

3. Develop disposition agreements for documentary materials and templates that define their content, context, structure, and presentation.

- The originating entity (e.g., managers, creators) develops disposition agreements (e.g., records schedules, deeds of gift, or deposit agreements) that include descriptions of materials groupings, specific data about the materials (e.g., inclusive dates of the materials), and instructions on what the originating entity will do with the materials when they are no longer needed for active use.

- The originating entity (e.g., managers, system administrators) defines templates for groupings of documentary materials (i.e., specific record series or collections), as well as for individual types of documentary materials (e.g., directives, memorandums), and registers them in ERA. The originating entity accesses ERA to register new templates or to select from existing templates. Managers can search ERA for existing templates or similar templates.

- Originating entities develop templates with varying levels of detail appropriate to the materials. For example, templates for temporary materials may be developed at a lesser level of detail than for archival materials requiring long-term preservation. Also, in cases where it is not appropriate, or even possible, to develop unique templates, originating entities may use a general, NARA-provided template to transfer materials to NARA. The general template would allow the transfer of documentary materials in their original proprietary format with a minimum number of descriptive elements required by NARA for managing the materials after they are transferred. However, regardless of whether the originating entity or NARA (e.g., in the case of presidential materials) develops the templates, NARA's ability to preserve and provide access to the materials depends on both the quality of the related templates and the accuracy and effectiveness with which the characteristics of the documentary materials are captured.

- ERA validates the templates created under this activity to ensure that they were created according to NARA guidance and include all mandatory elements. If the templates are rejected, ERA notifies the originating entity and requests correction. After ERA validates the templates, the disposition agreement must be approved by NARA before any

materials can be transferred to NARA holdings or destroyed (see 6.2.2 for approval of disposition agreements). The originating entity (e.g., managers) submits the disposition agreement and the templates to ERA using a reliable method of communication.

4.   Transfer documentary materials to NARA holdings.

NOTE: Refer to the Appraiser Scenario (Section 6.2) for additional activities completed before materials are transferred to NARA holdings.

- The originating entity (e.g., custodians, system administrators) transfers the documentary materials to ERA in accordance with the approved disposition agreement and the validated templates. For transfers of documentary materials that do not conform to the approved disposition agreement and templates, ERA will notify the originating entity that additional information is required. In certain cases, ERA may still accept the materials, although the processing and service levels may differ.

- ERA may receive materials through electronic communication with the originating entity, or on acceptable media. The originating entity will transmit the documentary materials along with templates describing their key characteristics to ERA using a reliable method of communication.

6.2   Appraiser Scenario

The following scenario outlines ERA's role in facilitating the interaction between the appraiser and the originating entity throughout the process of reviewing and approving a transfer of documentary materials to ERA. As described in the example below, ERA will have the capability to validate templates, streamline NARA's review and approval process, generate reports, track statistics, and provide a reliable method of communication between the originating entity and NARA. Although this scenario presents a relatively high degree of NARA involvement with the originating entity prior to transfer, it does not mean to suggest that ERA requires this level of interaction. In many instances, NARA will accept documentary materials for which there has been little or no front-end preparation by the originating entity prior to transfer. For example, in some instances, if the originating entity no longer exists, NARA staff will use ERA to perform many of the originating entity activities.

6.2.1   User

The appraiser is a user who works with originating entities to develop disposition agreements, templates, or other information about the content, context, structure, and presentation of documentary materials. For federal records, the appraiser makes recommendations on the value and final disposition of materials that will be transferred to ERA, or that will be disposed of by the originating entity. For legislative, presidential, or donated materials, the appraiser may develop templates, disposition agreements, or other information about materials that are neither scheduled nor compliant with ERA's transfer specifications.

6.2.2   User Activities

1. Review disposition agreement and related templates.

   - The originating entity submits disposition agreements (e.g., records schedules, deeds of gift, deposit agreements) and templates to ERA for materials proposed for transfer to NARA holdings. Templates describe both groupings (i.e., record series or collections), as well as specific types (e.g., memorandum, directive), of documentary materials. Formal submissions are transmitted using a reliable method of communication. Prior to formal submission, the appraiser may assist the originating entity in developing templates or disposition agreements.

   - ERA validates the templates submitted by the originating entity. ERA checks for conformance to NARA's guidance regarding the inclusion of core elements necessary to manage the documentary materials once they are received. If the templates or disposition agreements are rejected as invalid, ERA notifies the originating entity that the documentation is in error. ERA establishes an electronic disposition package comprised of the disposition agreement, templates, and their respective validation reports. ERA notifies the appraiser that the disposition package is stored in ERA pending review.

   - The appraiser accesses ERA to review the disposition package. The appraiser determines whether the disposition agreement and templates are adequate. Also, the appraiser reviews the validation report for errors or inconsistencies. This step is a review of the originating entity's submission for adequacy and does not involve appraising or examining documentary materials. If more information is required, the appraiser contacts the originating entity.

2. Review and verify documentary materials.

   - After the appraiser determines that the disposition package is adequate (i.e., compliant with applicable policy and procedures), the appraiser contacts the originating entity in order to examine the documentary materials. To complete the review, the appraiser may request that the originating entity transmit samples of the materials to ERA. Alternatively, the appraiser may review the materials in agency systems. In certain cases, examinations may not be required, or even possible.

   - After reviewing the disposition package and the documentary materials, the appraiser determines their acceptability based on reports generated by ERA and compares them with the contents of the materials. The appraiser prepares reports with recommendations that are captured in ERA as additions to the disposition package. When the disposition package is ready for approval, ERA manages the review process by tracking the status of the package and routing it through NARA managers to the Archivist of the United States for approval.

- Throughout the review process, ERA generates and maintains statistics and performance data for review by the appraiser and reporting to management.

3. Notify originating entity of approved disposition package.

- After the disposition package is approved, it is available for dissemination and implementation. ERA preserves evidence of the approval, along with proof of notification to the originating entity, as part of the final disposition package. At this point, the content, context, structure, and presentation of the materials, as well as their disposition instructions, are adequately described and defined to ensure the successful transfer of the materials to NARA's holdings at a later date.

4. Monitor implementation of disposition agreements.

- Based on the approved disposition agreements, ERA produces reports for the appraiser and other NARA managers that track documentary materials that should be transferred to NARA, or are eligible for disposal. Reports may be automated to serve as reminders to both NARA and the originating entities that certain materials can be transferred or destroyed. Examples of other implementation reports generated by ERA include reports on gaps in NARA's holdings, unauthorized disposal reporting, and other reports used to evaluate the records management programs of certain originating entities.

6.3   Accession Processor Scenario

This scenario presents an example of how an accession processor might use ERA to receive a transfer and then to accession and process the electronic documentary materials received. The duties of the accession processor include accessioning and processing functions that are currently allocated to various NARA staff roles. The scenario is broad enough to include all types of originating entities, as well as all types of electronic documentary materials that they might transfer. However, this example is not intended to account for all possible situations in this user class. The steps listed below should not be necessarily interpreted as a sequence of events. While steps 1-4 under 6.3.2 must be completed first, steps 5-7 could conceivably be performed in different order, or simultaneously, or a step could be performed in segments over time. In cases where the originating entity no longer exists, NARA staff will serve as the originating entity.

6.3.1   User

The accession processor is engaged in administering the accessioning, verification, and arrangement of archival materials, and in preparing them for access. The accession processor interacts with originating entities and with other NARA staff roles at various points in this scenario. The accession processor user class may include a variety of users who specialize in some aspect of the activities described below. For example, an accession processor can be a preservation specialist who works with originating entities and appraisers to develop the necessary templates and strategies for transfer and accessioning of documentary materials. It can

also be an accessioning specialist who performs verification of documentary materials upon their transfer.

Appropriate NARA staff members are responsible for specific activities – such as declassification review and accessioning approval – associated with the accession processor's duties.

6.3.2   User Activities

1. Transfer

    *   The originating entity submits a request to ERA describing a proposed transfer of electronic documentary materials.

    *   ERA evaluates the request and provides permission for the originating entity to transmit the transfer, or informs the originating entity to postpone the transfer until ERA provides permission.

    *   The originating entity transmits the transfer of electronic documentary materials into ERA. A transfer may include a transfer agreement, a description of the materials transferred, and the electronic documentary materials themselves. The transfer may be done electronically or via media.

    *   ERA stores the transfer in a manner consistent with its level of security. ERA confirms receipt of the transfer and notifies appropriate NARA staff and the originating entity of the arrival of the transfer.

    *   The accession processor uses ERA to verify the transfer. ERA verifies that all the appropriate components (transfer agreement, description of the materials transferred, electronic documentary materials) of the transfer are included. If a component is missing, ERA produces reports of any problems or discrepancies and notifies the accession processor and originating entity. When the originating entity has transmitted any missing components or documentary materials, or has replaced such items, ERA notifies the accession processor.

2. Creation of the Accession Package

    *   ERA creates an accession package containing the information relating to the accession. The accession package includes the transfer agreement, the description of the materials transferred, correspondence between the accession processor and the originating entity, and other important information produced during processing and accessioning.

3. Verification and Initial Security Review

    - ERA notifies appropriate staff to review the transfer for possible access restrictions on the documentary materials. Such restrictions are indicated in the transfer agreement or the description of the materials transferred. Appropriate staff use ERA to verify the existence of the access restrictions in the materials. If staff find a discrepancy between the security and access restrictions identified on the transfer agreement or the description of the materials transferred and those on the materials, they use ERA to notify the originating entity of the need for a correction to the transfer agreement, or the need to return the documentary materials.

    - ERA verifies the templates, disposition agreements, and documentary materials. ERA verifies that the materials conform to the specifications for the transfer. ERA produces a report showing the results of the verification, and includes the report in the accession package.

    - If ERA indicates a problem with documentary materials during the verification process the accession processor is alerted. The accession processor determines whether to add a note to the accession package describing the problem or discrepancy in the data. If necessary, the accession processor may also notify the originating entity of the problem, and request that the originating entity transmit a replacement.

    - The accession processor uses ERA to indicate approval of verified documentary materials and includes the verification report in the accession package.

4. Accessioning

    - ERA notifies appropriate NARA staff that the accession is ready for approval. Appropriate NARA staff review the accession package and the documentary materials. If no other problems are identified during verification and initial security review, NARA staff approves the transfer agreement. When the transfer agreement is approved, ERA indicates that the accession has been accepted into NARA holdings.

    - ERA notifies the accession processor that the accession has been approved. ERA notifies the originating entity of the approval, forwards a copy of the transfer agreement, and explains that the originating entity will be notified after the documentary materials are processed. Similar messages are sent periodically reporting what phases of processing have been completed.

5. Arrangement

    - The accession processor uses ERA to review the arrangement of, or relationships between, materials in the accession. ERA allows the accession processor to change relationships between documentary materials and groupings of materials, if necessary. These changes can be viewed by the record user to check the authenticity of the original

accession. ERA maintains and presents the arrangement scheme as approved by the accession processor. However, the original order of the materials as received is preserved along with any new arrangement imposed by the accession processor.

6. Preparation of Documentary Materials for Use in Access

- The accession processor uses ERA to prepare descriptions of documentary materials or enhance descriptions of the documentary materials provided with those materials. These descriptions are used by end-users to identify the existence of documentary materials that they would like to access.

- The accession processor uses ERA to define and implement a higher-level template to facilitate access to groupings of documentary materials with similar characteristics.

7. Conclusion of Processing

- ERA notifies the accession processor and originating entity that the processing for the accession is complete. The accession processor verifies that all processing is completed and indicates completion of processing in ERA.

- ERA notifies the access reviewer that the documentary materials are available for review.

- Documentary materials and their associated templates are stored in ERA.

6.4 Preserver Scenario

The Preserver scenario illustrates the activities undertaken to ensure the reproducibility of the essential characteristics of electronic records over time. Preservation activities include:

- Defining the norms under which appraisers negotiate terms and conditions on how originating entities may transfer electronic records to ERA
- Defining requirements for preservation both in general and for specific types and/or bodies of documentary materials
- Managing templates that articulate the characteristics that must be preserved and applied to prevent the loss or corruption of documentary materials
- Ensuring continuing access to the materials over time
- Independently evaluating how well the system satisfies preservation requirements
- Approving system changes, such as in storage media, that might impact the preservation of documentary materials

6.4.1   User

The preserver is a specialized user class that works closely with the accession processor, appraiser, and NARA record users to ensure that electronic documentary materials are properly preserved and that the system can produce authentic copies of them.

6.4.2   User Activities

The preserver has the capability to provide pre-transfer support to originating entities, appraisers, and accession processors. The preserver analyzes information about current and expected transfers of electronic documentary materials and uses ERA to create generic templates for types of documentary materials and groups of those materials. The preserver stores these templates in ERA for use by originating entities and appraisers.

- The preserver identifies characteristics of documentary materials that cannot be accessioned, preserved, or accessed using existing tools or templates, and determines if they could be accommodated by modifications or extensions to existing tools or templates, or by creation of new templates. If so, the preserver uses ERA to develop new templates and stores them in ERA. If not, the preserver informs management of new requirements for later versions of the ERA system.

- The preserver guides originators and appraisers in determining which generic templates apply to specific sets of documentary materials, and assists in the process of developing and registering specific templates. The preserver articulates the preservation norms that appraisers follow in negotiating with the originator's specific terms and conditions for transfers to ERA. The preserver works with administrative users to ensure that ERA can and does validate transfers against these terms and conditions.

- For documentary materials that do not conform to terms and conditions of transfer or to registered templates, the preserver determines whether the exceptions should be accepted and documented "as is." Alternatively, the preserver uses ERA tools to build new templates or modify old ones, and to transform the materials into formats in which their essential characteristics are expressed in a hardware and software independent form.

- The preserver defines requirements for an audit trail of all transformations performed in ERA in order to document the relationship between the materials acquired from the originator and their transformed versions, and defines reporting requirements for other system functions and parameters related to preservation. The preserver reviews the audit trails and reports to evaluate system performance against preservation requirements.

- The preserver uses ERA to examine samples of documentary materials being preserved to ensure that nothing is lost or corrupted in storage. The preserver works with administrative users to ensure that necessary changes, such as media migration, are implemented in the storage system.

- The preserver ensures that ERA captures and retains metadata and information about documentary materials necessary to ensure their preservation and accessibility and to certify their authenticity.

- The preserver uses ERA to change documentary materials from a preserved format to formats that can be accessed on record user systems.

- The preserver uses ERA to review transfers of documentary materials and the changes applied to them to determine if objectives are being achieved effectively and consistently.

- The preserver identifies opportunities for improving quality or service through further changes to documentary materials according to new templates and uses ERA to perform such changes.

6.5   Access Reviewer Scenario

Upon receipt, ERA will maintain sensitive and national security classified information in accordance with regulations governing such information. The appropriately cleared access review staff will be able to begin the review process at any point after transfer, but this step will generally begin after accessioning.

ERA will assist the access reviewer in conducting a systematic review of documentary materials and in reviewing specific items in response to a request. ERA will allow the access reviewer to coordinate review with equity-holders outside NARA when necessary. ERA will track the status of the item when review is complete, and will facilitate redaction of sensitive or classified information from otherwise open items. ERA will allow the access reviewer to change determinations over time in subsequent reviews and appeals, and will keep track of the different releases of the item over time. ERA will track the review work and produce reports regarding production.

6.5.1   User

The access review staff, including reviewers and managers, is a middle user responsible for reviewing security classified or otherwise sensitive information in order to determine if the information can be made available to a record user.

6.5.2   User Activities

1. Initiation of Review

    - *Systematic review.* Using information captured when the material is accessioned, ERA notifies the access review staff that there are new materials with security classification or other sensitivity concerns. ERA assists management in prioritizing review work by providing information regarding overall workload, age of the materials, size of the accession, and availability of declassification guidelines for the material. A manager then uses ERA to initiate the project and define the scope. For example, large accessions may be broken into several projects. The review sequence for the project is defined; some projects will require second reviewers, presidential representatives, vice presidential representatives, etc. ERA produces a subset of items for review under the project and tracks the stages of review; or

- *Requestor-initiated review*. When a request is received, ERA tracks information about the request (e.g., requestor name and address, date received) and places it into a queue based on its complexity. Within each queue, the request is answered in a first in, first out manner. ERA allows the access reviewer to search for relevant items. If the items requested are open, the reviewer notifies the requestor about the various ways they may be viewed or how copies may be purchased through ERA. If the items requested contain potentially security classified or otherwise sensitive information, ERA produces a subset of items for review and tracks the stages of review.

2. Determination

- The reviewer uses ERA tools to assist in making review determinations. ERA assists in determining whether the same information has been released before. ERA assists the reviewer to locate sensitive and classified information by searching for specified keywords, concepts, document types, and formats. ERA provides a reference tool that helps the reviewer determine if specific statutes might restrict information in a particular review project.

- The reviewer reads each item and makes determinations. ERA captures the access determinations (released, redacted, or withheld) and provides tools to allow the reviewer to produce redacted versions of the item if necessary. In addition to the determination, ERA captures the reason (FOIA, PRA exemption, etc.) for any withholding, and in the case of Presidential materials, can mark the item as "personal" if appropriate. If an item is withheld in full, ERA will create a placeholder that can be made available to the record user indicating reasons for withholding.

- During the review, the reviewer looks for security classified items containing the equities of other agencies. ERA provides access to items for coordination with other agencies that must perform additional review. ERA tracks information about the coordination process: Where are the items sent? When are they sent? When are they returned? What were the determinations and corresponding reasons of the outside equity holders? When is the referral complete?

3. Notification

- ERA notifies second or subsequent reviewers (who could include representatives of former and incumbent Presidents) when they must perform additional review. ERA captures versions of released items and allow previous review determinations and corresponding reasons to be superceded by newer determinations. ERA tracks each released variant version of an item. ERA tracks when review is complete and the item is available for the record user.

- If the requestor appeals NARA's determinations, ERA captures information about the appeal request (when received, what was appealed) and about the sequence of review for

the appeal. The reviewer in the appeal can change previous determinations and ERA will capture additional versions of the appealed items.

- ERA produces statistics on review work based on a scheduled reporting scheme for performance reporting, the Annual FOIA Report, and other reporting and management requirements.

6.6   Record User Scenario

This scenario describes how the record user will employ ERA to search for, access, and retrieve documentary materials.

ERA will allow a broad array of search and retrieval capabilities that can be adapted to each user's needs, privileges, and clearances.

6.6.1   Types of Records Users

The Records User is any individual who wishes to obtain access to, or copies of, documentary materials preserved in ERA. These individuals fall into three broad types.

- ***Originating entity,*** including agency records creators, records officers, agency resource managers, courts, congressional staff, presidential administrations and staff, and others.

- ***NARA staff members,*** including those NARA staff members that undertake access review, arrangement and description, order fulfillment, preservation activities, records management, reference services, systems operations, and others.

- ***Public,*** including authors, congressional researchers, the White House, the Courts, Federal Government agencies, contract researchers, educators, exhibition preparation staff, genealogists, family and local historians, filmmakers, information service providers, interpreters, publishers, rights recipients (federal employees, immigrants, and veterans), reporters and the media, scholars (historians, other social scientists, and scientists), state and local government personnel, professional organizations and their members, supporters' groups, foundations, donors of historical materials, students, and the general public.

6.6.2   User Activities

The Record User will undertake the following steps in using ERA to obtain records (The steps listed below should not be necessarily interpreted as a sequence of events. For example, steps 2 and 3 can occur in a different order than shown here.):

1. Access

- All record users will be able to search and retrieve unclassified, unrestricted materials, which have been processed into ERA, either anonymously or by signing on as a

registered user. Users with special access rights (clearances) and privileges will be checked for appropriate clearances by ERA upon accessing the system.

2. Search

    - The user searches ERA for information describing records and for actual content within records. Such searching may be done at a variety of levels of aggregation (documentary materials series/collections or individual items). Within the user's given access rights and privileges, the user may take advantage of available functions and features. ERA responds to queries by identifying either sets of documentary materials, or individual documents, with results constrained by the user's access rights. The user views and/or sorts the results of the search, modifies the search if necessary, and refines or saves query results as desired. In this manner, the user is able to progress from a query about a general topic to a list of specific documentary materials that the user may wish to view.

3. Retrieve/Receive

    - From search results that identify relevant documentary materials, the user views and accesses the records desired. The user directly interacts with the ERA system and accesses records in accordance with established user privileges and access rights. NARA help is not needed or requested. At anytime if the user has questions, has trouble searching, requires services, or is unable to retrieve/receive records due to access restrictions, the user has the capability to enter into a "mediated request" with appropriate NARA staff to request additional help (for example, FOIA requests).

4. Mediated Request

    - The user may request help from NARA staff while using ERA. A mediated request may include such activities as NARA staff answering questions, conducting and handling searches, providing certified copies, processing special requests, expediting requests, handling FOIA appeals, and similar issues. ERA tracks the communication and information about the mediated request. After all questions are answered, and issues resolved, special requests processed the user retrieves/receives records as described in number 3, Retrieve/Receive (see above). If the records are restricted the user may instead receive information concerning the status of a particular request.

5. Fee for Service

    - Record users may request services that require them to pay a fee. If a fee must be collected or charged-back for any special service during this process, ERA tracks, reports upon, and routes any required financial transaction information to all appropriate billing/accounting systems, and provides the requested service on authorization.

6.7 Administrative User Scenario

This scenario is included to demonstrate some of the capabilities that would be included in ERA for the administrative user of the system. Not all administrative capabilities are described in the scenario and many of the system functions will be done without user involvement.

6.7.1 User

The administrative users are those that handle such activities as assigning user rights and privileges, scheduling reports, and monitoring the system.

6.7.2 User Activities

1. Assign user rights and privileges

   - The administrative user assigns user rights and privileges based upon clearances held, permissions granted, job roles captured at the time of registration within the system, and NARA policy. For example, users with appropriate clearances will be able to view classified records necessary for their work. The user is granted appropriate access rights (e.g., access to classified or sensitive data, administrative access) and systems capabilities (e.g., ability to edit, input data, check security, produce user reports). Note that users with "public" access rights can be created by ERA, and that accounts can also be established for those users who wish to avail themselves of fee services.

2. Schedule Reports

   - The administrative user logs on to ERA and begins creating audit reports. The request for reports could be based on a specific requirement from NARA or from a system monitoring need. Starting from scratch or from an existing report, the user creates a new report. The reports could cover such activities as system usage, system capacity, performance, and workflow statistics (note that many of these reporting features should also be available to non-administrative users).

   - The reports are scheduled for regular distribution to the appropriate people or are created on an as needed basis.

   - Schedules and contents of scheduled reports can later be changed as required.

3. Monitor System

   - ERA provides the administrative user with the ability to monitor system performance and security.

   - The administrative user then adjusts the system storage or performance characteristics to alleviate the problem.

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7.0   Summary of Impacts

The implementation of the ERA System will have wide ranging impacts on both NARA and its customers. The ConOps IPT has identified a variety of potential impacts that should be taken into account as NARA develops plans for the ERA system.

7.1   Operational Impacts

NARA may have to implement changes in IT structure and methods to accommodate the ERA system. ERA will have the ability to handle vastly more records, as well as records with a wider variety of formats, than NARA has been capable of addressing in the past. Therefore, operational impacts may include:

- Enterprise architecture restructuring

- Enterprise security reengineering

- Retraining staff

- Information technology staffing increase

- Business operations workflow improving

7.2   Organizational Impacts

As a result of ERA's potential impact on all facets of NARA operations, NARA may have to reexamine current policies and business practices and develops new policies and business practices as necessary. ERA may also require the revision of position descriptions to reflect changes in NARA's business practices. Policy may have to change or be developed to support:

- The inclusion of temporary electronic records in ERA

- Staff responsibilities for temporary electronic records

- Charge-back policies for temporary electronic records

- Tracking of records not stored in ERA

Possible impacts include:

- A reexamination of archival principles as they relate to electronic records

- An assessment of how ERA fits organizationally within NARA and relates to NARA program units

- The commitment of resources (e.g., funding, time, staff) by NARA and originating entities to front-end efforts to address electronic records

- The need for cross-functional, inter-disciplinary staff teams

- The development of education and training for both NARA staff and record users

- Additional personnel for a robust help desk facility for NARA staff and record users

- Improved opportunities for career development for NARA staff

- The production of templates for each type of material will cause an increased workload but will be needed for validation, preservation, and access.

- An opportunity for agencies, states, and other entities to avail themselves of ERA technology for their own system design purposes.

There are likely to be additional impacts beyond those above.

8.0　Analysis of the Proposed ERA

Various benefits, limitations, advantages, and disadvantages of ERA are covered in this section.

8.1　Disadvantages and Limitations

Potential disadvantages or limitations to ERA include:

- High development costs

- High costs associated with security

- NARA staff anxiety brought about by new responsibilities resulting from changes due to electronic records

- Poor NARA staff morale without proactive change management

- Impact on originating entities (resources required to prepare for transfer of materials to NARA, greater records management responsibilities)

- User misunderstanding of ERA's relation to the universe of NARA's holdings

8.2　Summary of Benefits and Advantages

ERA will offer numerous benefits to NARA and record users including:

- The preservation of electronic records that would otherwise be lost

- A wider variety of electronic records in NARA holdings

- Consolidated electronic records administration and streamlined internal workflow

- More front end involvement with originating entities

- Higher quality accessioned electronic records

- New tools to support processing and review of electronic records
  - Tools to aid in review decisions
  - Tools for withdrawal and redaction
  - Tools for description

- Faster access to electronic records

- The ability to service additional record users

- Increased responsiveness and consistency with record users

- Remote access to electronic records

- Enhanced capabilities for searching electronic records

Appendix A – Acronyms and Definitions

The technical terms used in this document are defined in IEEE Std 610.12-1990*, IEEE Standard Glossary of Software Engineering Terminology.*

ACRONYM	DEFINITION
AAD	Access to Archival Databases
ADRRES	Archives Document Review and Redaction System
AERIC	Archival Electronic Records Inspection and Control
APS	Archival Preservation System
ARC	Archival Research Catalog
ASCII	American Standard Code for Information Interchange
BCD	Baseline Characterization Document
ConOps	Concept of Operations
ERA	Electronic Records Archives
FOIA	Freedom of Information Act
IBM	International Business Machines
IEEE	Institute of Electrical and Electronics Engineers
IPT	Integrated Product Team
IT	Information Technology
MNS	Mission Needs Statement
NARA	National Archives and Records Administration
PROFS	Professional Office System
URTS	Unclassified Redaction and Tracking System

Accession – (1) the formal acceptance of legal custody for an acquisition (transfer) of records, (2) the recording of such act, or an acquisition (transfer) so recorded, and (3) the records accepted into legal custody.

Accession Package - Includes the transfer agreement, the description of the materials transferred, correspondence between the accession processor and the originating entity, and other important information produced during processing and accessioning.

Access Reviewer - 1) a NARA archivist conducting systematic or requestor initiated review of documentary materials in NARA physical or legal custody. 2) an individual external to NARA from an agency that holds equity in classified items held by NARA. 3) the legal representative of the incumbent or former President or Vice President who have the right to assert a claim of privilege over presidential documentary materials in NARA custody or to determine the legal status (presidential or personal) of presidential documentary materials in NARA custody. 4) any other individual external to NARA who has the right to review documentary materials held by NARA and determine whether documentary materials should be released or not.

Appraisal - the act of assessing records or manuscript collection's value--including informational value, artifactual value (uniqueness and physical qualities such as process, media, or techniques

used), evidential value, associational value, administrative value, and monetary value. This assessment involves using criteria such as age, subject content, contextual documentation, condition, quality, quantity, legal restrictions, filing organizational problems, public relations concerns, and associational nature.

Appraiser - the NARA archivist who works with the originating entity to make recommendations on the value and final disposition of documentary materials that will be transferred to NARA holdings, or that will be disposed of by the originating entity.

Concept of operations (ConOps) document - a user-oriented document that describes a system's operational characteristics from the record user's viewpoint.

Disposition agreement - the provisions for transfer of documentary materials in a records schedule, deed of gift, or deposit agreement that includes descriptions of the materials, specific data about the materials (e.g., inclusive dates of the materials), and instructions on what the originating entity (e.g., custodians) will do with the materials when they are no longer needed for active use.

Disposition package - comprised of the disposition agreement, templates, and their respective validation reports.

Documentary materials (also "materials") - recorded information created or received by an originating entity under Federal law or in connection with the transaction of the organization's business. Examples include books, correspondence, memorandums, documents, papers, pamphlets, works of art, models, pictures, photographs, plats, maps, films, and motion pictures, including, but not limited to, audio, audiovisual, or other electronic or mechanical recordation's. Documentary materials may be born digital or converted from paper, microfilm, or other analog formats to an electronic format.

Equity - the right of a particular agency to determine the current level of classification of documentary materials. Documentary materials may have multiple equities, and multiple agencies would have the rights to determine the current level of classification.

Grouping - a set of related materials such as a record series, collection or file unit.

Holding - Documentary materials sent to, and accepted by, NARA for storage or preservation.

Originating entity - collectively describes the users listed below that create, receive, maintain, or manage documentary materials. Originating entities include all organizations in the Executive, Legislative, and Judicial branches of the U.S. Government, and other persons or organizations donating documentary materials to Federal custody. In some cases, NARA itself may act as the originating entity in maintaining and managing documentary materials from other originating entities (e.g., after the end of a presidential administration, following the transfer of congressional materials).

Physical custody - either temporary or permanent custody of records, manuscripts, and personal papers. Physical custody does not necessarily entail intellectual control (cataloging and description in finding aids) or ownership. Nor does physical custody entail the right to dispose of portions of the collection without appropriate permission.
At NARA, records centers have physical custody of records without ownership, while the National Archives and the Presidential Libraries may assume ownership.

Placeholders - placeholders contains information about documentary materials that have been restricted or exempt from release and mark the place in the grouping of documentary materials where the items originally resided. Placeholders may contain information about the names of the records creators, the subjects of the records, and the reasons for restrictions or exemptions.

Presentation - the external appearance or rendering of documentary materials for a human. Presentation characteristics of documentary materials are perceivable features that present a document's content to a user's senses. They may be graphic, aural, or visual in nature (fonts or font weights, filters applied to audio or visual materials, etc.).

Preservation - the process of maintaining the authentic context, content, and structure of electronic records and their templates in a certifiable way over time for continuous viewing, use, and downloading despite:

- continuous changes to the system infrastructure of hardware and software
- ever changing storage and display formats,
- inadequate supplies of historic playback equipment,
- potential security and data integrity risks from hackers and users,
- natural disasters and systems outages, and natural degradation of all media over time.

Processing - the activities of accessioning, arranging, describing, and properly storing archival materials.

Processing Archivist - the person responsible for undertaking the processing of a transfer.

Project - any archival review effort whether systematic or requestor initiated.

Provenance - (1) the entity (for example, person, family, organization, or office) that either created the records or accumulated them in the natural course of activity. (2) the history of physical custody of a collection or item.

Records Schedule - a document providing mandatory instructions for what to do with records (and non-record materials) no longer needed for current business, with provision of authority for the final disposition of recurring or nonrecurring records. Also called records control schedule, records retention schedule, schedule, or Standard Form (SF) 115.

Redact - to remove portions (words, lines, paragraphs, and pages) of documentary materials restricted or exempted from release in order to release the remainder. When documentary materials are redacted, NARA must mark the sections of the documentary materials that have

been removed and provide reasons (FOIA exemptions, for example) for the removal of the words, lines, paragraphs, or pages.

Review (General) - the process of studying documentary materials or sets of documentary materials (series, for example) to determine whether they may be released to a record user. Review may be conducted on a macro scale and result in the release of entire series of documentary materials, or review may be conducted line by line and result in the release of only portions of documentary materials comprising a series.

Review (Systematic) - a provenance based method of review whereby all the documentary materials of a given individual or offices are completely reviewed. Systematic review is usually driven by archival or internal NARA administrative priorities instead of external factors.

Review (Requestor Initiated) - a review of documentary materials based on a request from a source external to NARA. Examples would be a court ordered subpoena or a Freedom of Information Act request for documentary materials relating to a particular subject. Requestor Initiated Review is generally based on a specified topic that encompasses the documentary materials of various individuals or offices.

Scenario - (A) a step-by-step description of a series of events that may occur concurrently or sequentially. (B) an account or synopsis of a projected course of events or actions.

Series - a group of documents arranged or maintained as a unit within a file system because of their shared circumstances of creation, receipt, or use.

System - includes all of the associated equipment, facilities, material, software, hardware, policy, technical documentation, services, and personnel required for operations and support at NARA.

Template - a model of the essential characteristics of the content, context, structure, and presentation of a type (meaning genre or class) of documentary material, such as a memorandum, a directive, an annual report, a topographic map, etc. The model should not contain characteristics that are dependent on specific types of hardware or software that are proprietary, or are subject to obsolescence. Such a model is similar to NARA's current concept of a "record layout" except that the method of creating the model has to be flexible enough to accommodate documentary materials that are more complex than a simple table structure.

Temporary records - refers to records of an originating entity that are authorized for destruction after a specified time or condition.

Transfer - the act involved in a change of physical custody of records/archives with or without change of legal title, or records/archives so transferred.

User - (A) an individual or organization who uses a software-intensive system in their daily work activities or recreational pursuits. (B) the person (or persons) who operates or interacts directly with a software-intensive system.

User Need - a user requirement for a system that a user believes would solve a problem experienced by the user.

Verification - determining if accession/transfer of records actually contains records it purports to contain and only those records. This is currently done by comparing the actual content of records received from a Federal agency to the description of those records as represented by the record layout and codes provided by that agency.

Workbench - refers to an ERA capability to provide specialized tools to search for, access, and retrieve electronic records; linkages to federal, state, local, commercial, organizational and other finding aids; and other functionality of interest to key user communities such as educators, genealogists, historians, and others. These capabilities might include special search engines, search result set prioritization or processing, links to NARA or external databases or finding aids, or similar capabilities.